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ASCENDING BEN NEVIS IN WINTER.

UPWARDS of twenty miles in circumference at the base, and rearing its head to an altitude of four thousand four hundred and six feet above the level of the sea, stands Ben Nevis, the loftiest mountain in Great Britain. To make the ascent has from time immemorial been the endeavour of those who care to behold Nature in her wilder aspects; nor is the journey one which the tourist is likely soon to forget. He marks it as a point in his life, and if he has been lucky in weather, he boasts with pardonable pride of having witnessed from his lofty stand-point the peaks of Ben Lomond, Ben More, Ben Lawers, Cairngorm, and other well-known heights.

Struck with the idea that the highest point in Great Britain might be utilised for the purposes of carrying out a series of meteorological observations, the main object of which should be to forecast the weather, Mr Clement L. Wragge, a Fellow of the Royal Geographical Society, succeeded last year in carrying this into practical effect. Making Fort-William, which town stands at the base of the mountain, his headquarters, he or his assistant made *daily* ascents to the top, where, with the aid of instruments, a series of observations was made in connection with the Scottish Meteorological Society. Debarred by winter from pursuing these observations, Mr Wragge again essayed the hazardous ascent in March, an account of which, with other interesting particulars, has been supplied to us by that gentleman. He writes as follows:

On the 31st of May, 1881, I had the honour of establishing the first Meteorological Observatory on the summit of Ben Nevis, a mountain in the county of Inverness, Scotland, and the highest point of land in Great Britain, being four thousand four hundred and six feet above the level of the sea. I had proposed to the Scottish Meteorological Society—who kindly provided the mercurial barometer—to place my own set of standard instruments on the top of the mountain; and to make daily ascents from Fort-William, for the purpose

of observing them, at the hours of 9, 9.30, and 10 A.M., if they would grant me certain facilities. I had devoted myself to a life of travel and research, and was convinced that in endeavouring to promote the establishment of meteorological stations at high levels, I was turning my energies in the right direction. With a view to securing simultaneous observations at high and low levels, my wife undertook to make observations at the same hours, near the sea-level—at Achintore, Fort-William. The Society—whose able chairman, Mr Milne-Home of Milne-Graden, was the first to suggest an Observatory on Ben Nevis, in view of the great benefits likely to accrue ultimately to science and the public from observations at such an altitude and position—accepted my offer, and cordially seconded my efforts. The result was, that last year regular daily observations were made on the Ben in all conditions of weather from the 1st of June to the 13th of October inclusive, without, I am proud to say, the break of a single day.

I ascended the mountain at the rate of about five days a week, arriving at the summit at 9 A.M.; and a trained assistant—Mr William Whyte, of Fort-William—relieved me in the ascent on the remaining days. Occasionally, as the posting-up of the observations for the Society was of itself heavy work, I was obliged to send my assistant to the Ben four days in one week; but I made a point of making up for it, and in consequence have sometimes climbed the Ben on eight or nine days in direct succession, returning to Fort-William each afternoon. Observations, besides being taken near the sea-level, were also made in connection with those on the summit of the mountain, at intermediate points during the ascent and descent, or upon any change which might suddenly take place in the weather. I usually took a pony by a circuitous path to a point within two thousand one hundred feet above the sea, and so I was fresh for the remaining and harder portion of the climb. Now and again, however, I trudged the entire distance, taking a more direct route.

With a view to making arrangements for the continuance of my meteorological work this coming season, I lately revisited Fort-William and Ben Nevis, leaving Edinburgh by the early morning train on the 27th of March, accompanied by an old Australian friend, Mr Philip Egerton Warburton. I also took my faithful Newfoundland dog 'Robin Renzo,' who in all conditions of weather accompanied me in my ascents of Ben Nevis last summer and autumn.

Arrived at Fort-William, we put up at the *West End*, a comfortable little hostelry held by MacIntosh; and, in order to discuss matters, I called on Mr Colin Livingston of the Public Schools, who takes a warm interest in the Ben Nevis observations. The result was that I decided to ascend next morning, Mr Livingston kindly undertaking to observe near the sea-level, in direct connection with my contemplated set of readings on the mountain.

In the morning we were up by five, and after a hearty breakfast, at once began to prepare for the ascent. The prospect was dreary enough. Incessant rain was falling in a soaking drizzle, and a dirty cloud-fog covered the mountains to a low altitude. To avail ourselves of his assistance in case of accident, we arranged to take with us Colin Cameron, a well-known guide.

By 5.40 we had greased our boots; and were soon threading our way through the streets of Fort-William, clad in our oldest suits, and with lashings round our trouser-legs for comfort's sake. Warburton carried a bundle of sticks; and Colin—besides a capacious bag containing oatmeal cakes, hard-boiled eggs, and sandwiches—a tin of sawdust steeped in paraffin, wherewith to light a fire, should we succeed in reaching the summit. My burden, though light, was an important one—namely, the travelling instruments—aneroid, thermometer, ozone tests; and a flask of the far-famed 'Long John,' necessary enough under the conditions of winter we soon had to face. Renzo, who made up the party, was in great spirits, occasionally loitering behind to salute an old friend, and again trotting ahead, familiar with every step of the way.

About 5.50 I paused to observe at the sea-level. Temperature was 46.7 F., aneroid 29.367; with a heavy pallium of rain-cloud covering the sky, and a moderate south-westerly breeze blowing. Our course lay along the Inverness road as far as the Bridge of Nevis; then we turned towards Claggan, following for some little distance the course of the deeply wooded and picturesque Glen. Here the birds were joyously singing their early lays of the coming spring; and beyond, the dark heights of Meall an t-Suidhe (Hill of Rest), capped with 'wisps' and 'tails' of gloomy cloud-fog, frowned over the Peat Moss below. At a shepherd's hut we paused, and took a few lumps of peat, in order the better to feed the fire we hoped to be able to make on the summit. The swamped Moss was soon crossed, and the ascent commenced up the slopes of Meall an t-Suidhe, the western spur of the great Ben Nevis system. At about three hundred feet we experienced strong south-westerly gales, sweeping

obliquely down the grassy slopes, so that, although the ascent at this point was comparatively easy, we had to struggle with the gusts, and kept slipping back, the ground being very soft.

At about one thousand feet a pause was made at 7.10 A.M., when the temperature was found to be 45.4, and the aneroid 28.215, with a moderate south-westerly breeze; clouds still covered the adjacent hills, and rain was falling. When about thirteen hundred feet up the mountain we reached the first plot of snow; and a hundred feet higher—where we encountered the first wisps of the cloud-fog—a frog was seen disporting itself in a swamp! The highest altitude, by the way, at which I have seen this reptile on Ben Nevis is two thousand three hundred and fifty feet, and this was in August last.

Now we had reached a level portion, and continued our course—leaping from stone to stone—over the black swamps, which were made the deeper by the melting snow. At about seventeen hundred and forty feet we saw a white mountain hare—an irritating chance for Renzo, who vainly chased it over the swamps and round the granite boulders, far and away. I have never before seen this creature at such a low elevation, though frequently at about two thousand four hundred feet; and its tracks have been noticed on the Plateau of Storms at four thousand feet.

We were now enveloped in the main cloud-fog, and pursued our way, making for the Lake (Lochan Meall an t-Suidhe). At eight o'clock this point was reached, and at the spot where I took intermediate observations last season, I took observations now, and found the temperature of the air was 43.0, of the water of the lake 40.0, aneroid 27.507. Heavy rain was still falling, a strong south-westerly gale was blowing, and cloud-fog enveloped all. The ground besides was rendered sloppy with melting snow. Pursuing our course, we now proceeded over the fairly level quagmire that lies between the Lake and the slopes of the Ben proper. Mosses and lichens thrive around here in abundance, and the spot is of much interest to the botanist. Foremost comes the reindeer moss (*Cladonia rangiferina*) in great profusion. I may just mention, too, for the sake of those who are specially interested in the subject, *Andreaea alpina*, *Lycopodium selago*, *Sphagnum cymbifolium*, *Sphagnum rubellum*; and *Scyphophorus pycnidatus*, *Cladonia uncialis*, and *Parmelia saxatilis*. Dwarf specimens of the heather (*Calluna vulgaris*) and bog grasses also abound; and the swamp is a favourite locality for the butterwort (*Pinguicula vulgaris*) and several kinds of orchis, which particularly arrested my attention early last summer.

At about two thousand feet we came to masses of snow lying in the trenches of the mountain side; and the next two hundred feet of the ascent were over slushy hags and melting snow, which rendered progress a hard task. Our course then lay over the rough felsites and porphyrites of the steep face of the mountain, and the most trying part of the climb commenced. We had now passed the practical limit of vegetation (about two thousand four hundred feet); but if I may slightly digress, I should like to mention here that many choice plants exist even above three thousand feet, and various kinds of mosses and lichens on the very summit of Ben Nevis.

Between the summit and the altitude of Buchan's Well,* which is three thousand five hundred and seventy-five feet above the sea, I have gathered *Saxifraga stellaris*; fine specimens of *Alchemilla alpina*, *Poa alpina*, and *Carex rigida*; the mosses *Oligotrichum hibernicum* and *Racomitrium lanuginosum*; and the lichens *Cetraria islandica*, *Lecidea geographica*, which adheres to the rocks, and *Stereocaulon paschale*, which grows in abundance on the top of the mountain. Between Buchan's Well and three thousand feet I have obtained specimens of the bilberry (*Vaccinium myrtillus*), *Viola palustris*, *Rhodiola rosea*, probably *Campanula rotundifolia*, *Potentilla tormentilla*, a dwarf eyebright in flower (*Euphrasia officinalis*), the turfy hair grass (*Aira cespitosa*), &c.

But there was not much botanising to be done at high altitudes on the present occasion, and on nearing the Red Burn, at two thousand six hundred feet, we saw that its rugged slopes were filled with vast shelving masses of snow many feet deep. It was evident that great difficulties were before us; and before pushing on, we determined to rest and refresh ourselves with a snack of luncheon; for the pure mountain air—though bitterly cold and raw—was yet most exhilarating, and our appetites had become keen. So, in the great ravine of the Red Burn, which drains a large portion of the western slopes, we paused, and enveloped in the cloud, and surrounded by tremendous fesses of snow, we eagerly discussed the contents of Colin's bag, Renzo sniffing around waiting for his share. My only fear was lest we might be overtaken by an avalanche. Colin declared that the snow-masses on the south side of the burn were some thirty feet deep; but, however this may have been, it was very evident that it would be highly dangerous to attempt to cross these deep accumulations from this side, so I decided to proceed by a different route, and to follow the ravine up its northern side. Slowly and carefully we plodded upwards, testing every step, yet nevertheless often stumbling into crevices, and sinking thigh deep in the soft treacherous snow. The ascent now became a matter of considerable venture and difficulty; nearly all the landmarks were buried, and the raw, chilling fog-sheet grew thicker. At last we reached a point near the source of the burn by Buchan's Well, and the view was desolate in the extreme. The well was completely buried; and one whole sheet of deep snow stretched through the fog beyond, dazzling the eyes by its excessive whiteness. After a brief pause to consider our position, we struck a course for the first precipices which lay directly ahead; and when we had waded along about another hundred yards, we got a glimpse of the edge—a formidable brink, smoothed over by great walls and heaps of snow, and looming through the fog like some great gulf of destruction. We now followed pretty much the outline of these fearful abysses, taking care to give them a good wide berth.

At length we reached the Plateau of Storms at four thousand feet—so named by me on account of the north-east and south-west gales that,

owing to the configuration of this portion of the mountain, sweep across it with great fury during deep cyclonic depressions. On one occasion last summer I had to fight every foot of my way across this plateau, crawling along, and pushing on from boulder to boulder, to obtain breathing-time, and some little shelter under their friendly lee—so great was the fury of the north-east gale. Its rugged blocks of agglomerate were now entirely covered by the uniform mantle of snow, and most of the cairns marking the track lay deeply buried. Now and again, however, just the top of some spectral-looking pile, lashed with snow, hove in sight through the cloud-fog to confirm us in our course.

At last at 10.40 A.M. I found myself once more on the top of Ben Nevis. But where were the instruments and observatory fixings which had been left there during the winter? Where was my hut, in a corner of which I had hoped again to kindle a fire? All literally snowed up. No trace of the notice-board, although about seven feet high, could be seen; the barometer cairn, also seven feet high, only showed two feet, and the great Ordnance cairn about the same. The north wall of the hut, about five feet high, was buried; and the south wall only just appeared. On searching the spot where the thermometer cage was fixed, we found the top of it, over five feet in height, nearly level with the main surface of snow. In fact, the entire cage was buried, only some four inches of it showing on the south side, where it is nearly seven feet from the ground. Hence it was impossible to get at the instruments inside. At the conclusion of my period of daily observations last season, I had left the maximum and minimum self-registering thermometers in the cage, having set them for the winter, and Mr Livingston observed them twice subsequently. The former, on Negretti and Zambra's principle, is an admirable instrument, especially adapted for high-level stations; for if properly managed, no reading can be lost by vibration during gales and storms. The same remark applies to Hicks' Solar Radiation Thermometer, which I also had in use last season.

Waiting patiently for eleven o'clock, when I had determined to take observations with my travelling instruments, we sat down on the snow by the barometer cairn. Colin meanwhile endeavoured to light a fire; but in the absence of shelter, the wind being very strong, all our efforts were in vain, and, moreover, the match-box had got damp. So we threw down the bundle of sticks and lumps of peat that we had carried with such fond hopes, and gave up the attempt in despair. Although drenched with the continuous moisture, and our hands swollen and numbed by the wet and raw cold, our appetites were keen enough; and we set to work—still enveloped by thick cloud—to demolish the remaining provisions, and poor old Robin Renzo again came in for his share. So lifeless were my fingers, that I could hardly shell an egg. At last the minute-hand drawing nigh to eleven, I 'swung' the thermometer, and found the temperature was 35.6; whilst the aneroid—which at the sea-level was 29.367—now read 24.945, with a strong north-westerly breeze sweeping across, accompanied by dense cloud-fog and incessant rain.

* Named by me after the able meteorologist and Secretary of the Scottish Meteorological Society.

Glad to quit the inhospitable region, we commenced the descent shortly after eleven, and retraced our tracks to the Plateau of Storms; then we followed the usual course, and paused at Buchan's Well at 11.50. Here the temperature was 37.6, aneroid 25700, and a strong breeze from south-west-by-west blowing. In our descent we now traversed, though not without danger, the huge slopes of snow in the Red Burn which we had beheld with apprehension and avoided when ascending. Then for some three hundred feet we traversed the south side of the burn; and near the crossing where we had paused for our first luncheon, Colin the guide boldly committed himself to the steep bank of snow, and seating himself, slid over it into the deep ravine, a feat of considerable hazard. Warburton followed; and I brought up the rear, suffering no harm, barring slight damage to a finger by the friction. Renzo was far more cautious. No amount of coaxing would tempt him to follow us, and with great sagacity he made a deviation, following the outline of the rocks, and keeping a somewhat zigzag course. At about two thousand nine hundred feet, we saw the track of a hill-fox; and a few ptarmigan about two thousand four hundred feet. Last autumn, I saw reynard's track at an altitude of nearly four thousand feet, and ptarmigan at three thousand five hundred and seventy feet. I have never seen these birds higher than Buchan's Well, or lower than two thousand feet. At two thousand one hundred feet we paused at a well which was opened up by Mr Brown of the Inland Revenue, Fort-William, last season, and found the temperature of the water 35.4.

Pursuing our way cautiously downwards, we reached the Lake again (eighteen hundred and forty feet above the sea) shortly before one o'clock, amid a strong south-westerly breeze, rain and cloud-fog; and when at last reaching the Peat Moss at the foot of the mountains, we found a strong south-south-westerly wind sweeping towards the front side of the barometric depression. At 3.13, at sea-level, Fort-William, I found temperature was 48.1, of the water of the Loch 44.3, and the aneroid 29285, having fallen 0.082 since the morning. Then to our hotel, which we reached in a pitiable plight, but nothing the worse for our adventures; and in a few minutes we were consoling ourselves with hot coffee and a pipe, preparatory to enjoying the excellent fare of our estimable host.

I can only here refer to the valuable results which I am very pleased to state have been worked out, under the auspices of the Scottish Meteorological Society, by Mr Buchan, from my daily observations of last season; but I am convinced that high-level stations in connection with observatories at lower levels adjacent, would prove of immense value to the country in the matter of weather forecasting. By such stations working together, we deal as it were with vertical sections of the atmosphere, and having regard to pressure, temperature, humidity, and wind, can investigate at different altitudes the nature and conditions attending the approach of the many 'disturbances'—some of which are warned from New York by the praiseworthy enterprise of Mr Gordon Bennett of the *New York Herald*, to whom the thanks of the British nation are due. What more suitable positions than Ben Nevis and Fort-

William could be chosen for such important investigations? Not only is the mountain the highest in the United Kingdom, but it rises almost directly from the sea-level, is on the Atlantic border, and in the very track of many of the most serious storms that travel from west-south-west to east-north-east, sweeping over the British Isles from the ocean, doing such immense damage to shipping and other property, and causing the loss of so many lives. Observations from Ben Nevis in permanent continuance, backed by Government, would enable us to give most effective aid in sending warning to our coasts, and to the continent, when such cyclonic storms are approaching. If a substantial observatory-house were erected there, to insure daily observations on the mountain during the storms of winter, with a subterranean telegraph-line for the purpose of conveying early intelligence of coming storms, the value of such an outpost station not only to Great Britain, but to the whole of Northern Europe, could scarcely be overestimated.

VALENTINE STRANGE.

A STORY OF THE PRIMROSE WAY.

CHAPTER XV.—'SHE LOVES ME. I SHALL WIN HER YET!'

'PERHAPS,' thought Strange, as the train bore him swiftly towards the great metropolis, 'it is the best thing that could have happened that Gilbert should have carried his jest so far. I can't step in between Lumby and the woman he is going to marry. And yet—she does not love him. It's the merest marriage of convenience. She brightens when I go near her, and Lumby's coming makes her dull at once.' (And this was not his egotism, but the simple truth.) 'I can't leave her! Never see her again?' Oh, vacant world! Let any man who has loved, remember what such a prospect seemed to him in the hot-blooded days of youth. The conflicting purposes in his mind so tore him, that by the time at which the train reached the terminus, his nerves were trembling and twitching, and he was so irritable as to be downright hungry for a quarrel with anybody who might present himself. He had chambers in town, which he had for the past year used but rarely, and to them he despatched his man, whilst he himself took a cab and sought out Gilbert. That ardent chum lived in Dane's Inn; and Val, eagerly dashing from his cab, rushed up the courtyard, nearly overturning the old Crimean commissioner in his haste, and reaching Gilbert's door, rained such a shower of blows upon it, that the startled echoes rolled and tumbled over one another down the darkened staircase, in their haste to answer. Mr Gilbert in person responded to this urgent summons.

'Hillo, Val! That's you, old man? Delivered from the house of bondage, eh?'—Strange glared at him from the semi-darkness; but the expression of his face being unseen by Gilbert, that young gentleman flowed on: 'Come in. Had to take strenuous measures—hadn't I? Thought I'd make 'em strong enough to lift you. Come in.' 'You unmitigated ass!' said Val, fairly boiling over.

'Eh?' said Mr Gilbert. 'Oh!' A slow smile lit up his broad mid-England countenance. 'Overdid it a bit, eh?'

'What did you mean by piling message on message in that idiotic way?'

'Here's gratitude,' said Mr Gilbert, with appealing hands spread abroad. 'Here's a specimen of thankfulness for friendship's toils!—Come in,' he continued, clawing Val by the shoulder and dragging him into the little hall. 'Three shillings for expenses; and sixpence for a drink to the commissionaire. You can't grumble at that—three journeys—twopence a journey. Hand over.' Val walked up and down in the sitting-room, heaping contumely on the over-zealous Gilbert. 'Three-and-six,' was that gentleman's sole response to all oburgations.

Strange, taking an inward survey of himself, became conscious of his own condition, and made an effort after calmness. 'I don't want to quarrel,' he said.

'No?' interjected the stolid Gilbert incredulously.

'Don't irritate me, there's a good fellow. I've had one or two things to disturb me, and the last straw may break the back of human patience.'

'You give me three shillings for the telegrams,' said Mr Gilbert humorously, 'and pay me back the sixpence I gave the commissionaire, and I'll let the matter sleep.'

'There's your money,' cried Val, throwing it on the table. 'Don't speak to me again.'

Mr Gilbert gathered up the money and threw it out of the open window. 'Don't you go into any more dull houses,' he answered; 'or if you do, don't ask me to lug you out of 'em!' Val was striding from the room; but Gilbert laid a hand upon his shoulder. 'Look here, Val,' he said; 'a joke's a joke.'

'And an ass, an ass,' said Val in answer, and disappeared majestic.

'Mr Strange!' cried Gilbert, following to the head of the staircase—Val was half-way down, and made no response—'Mr Strange!'—Val paused; perhaps Gilbert was going to propose a meeting, to avenge his outraged feelings.—'You'll find your three-and-sixpence in the courtyard, Mr Strange,' said Gilbert, in a voice of smoothest courtesy; and thereafter he exploded in a peal of laughter, which echoed up and down the hollow staircase, and pursued the unhappy Val half-way to the entrance of the Inn.

Driving to his own rooms, the young man found their solitude unbearable, and wandered aimlessly into the streets. There any chance object caught his eye and claimed attention with a foolish exigence which irritated him, though he submitted to it. A porcelain vase in a shop window; a looking-glass surrounded by diminutive Cupids and Broddingnagian wreaths of flowers; a coal-scuttle; the presentment of an imbecile Madonna framed in smoke-dried oak, and otherwise striving to look old; the exposed steel of a case of surgical instruments—anything seemed to be good enough to stare at. He wasted a little vacant observation upon each of these things, and upon many more, until, pausing to examine, with needless curiosity, a thermometer which hung in an Oxford Street optician's window, and having slaked that futile interest, he was about to turn away, when suddenly,

beside the thermometer, he saw the face which all this time had dwelt within his thoughts. It was a cabinet photograph, and so lifelike in its expression that it almost startled him. For one minute he was amazed, but in the next he became angry. By what right did any rascally shopkeeper dare to exhibit this sacred face to the public gaze? He was ready to quarrel with anybody, and entered the shop. Luckily, there were one or two people there already, and he had time to cool. He had no right to ask an account of the shopman; but being there, he must do something, and so, in place of making a disturbance about the photograph, he bought it. With the lovely face lying against his heart, he walked homewards. Reaching his own rooms, he set the photograph before him, and looked at it long and eagerly. Beautiful, impassive, smiling, it looked back at him, and the fancy which passion has always at command gave it life and colour. Fate beckoned him as he looked, and her gesture was imperative, because he was willing to obey her. When men choose to yield, Fate is always imperative.

Seeking, amongst a lot of tumbled papers in a drawer, for an envelope large enough to hold the photograph, he found but one, on the back of which were scrawled a number of lines, which he remembered once to have chosen haphazard from Shakspeare for mottoes in some Christmas sport. They had been written in pencil, with one exception, and were now faded and half illegible. The one exception was a line of Longville's in *Love's Labour's Lost*—'Thy grace being gained, cures all disgrace in me.'

'There is my motto,' said Val. 'Thy grace being gained, cures all disgrace in me.' He kissed the photograph, and put it in the envelope, and sealed it there. He had no more doubts about going back now. He had no plans, no resolves. What would come, might come; and he was content henceforth to drift with the tide, and to go whithersoever it might carry him. And being in haste to meet Fate half-way, he called suddenly to mind the fact that he had ample time to catch the midnight mail; and having instructed his servant to meet him at the station, he consigned the sealed envelope to his breast-pocket, and strolled slowly thither. He had no longer any will to fight against his love; and he put away all thoughts of Gerard from his mind, and was at peace in his Fool's Paradise.

He reached the Grange next morning, and spoke lightly of his call to town as a stupid jest, and stayed out the remainder of the time, meeting each day with Constance. Mr Jolly's time of festivity was coming to an end; his guests were preparing for flight; and at last the close came, and Val must go back into the world which had now no light for him.

On the last day, he was alone with Constance for a few minutes. She was at the piano, playing scraps of melody, and breaking abruptly away from them, as though her mind were somewhat restless. Val, standing near her, spoke, as lightly as he could.

'So we all fly away to-morrow,' he said, 'owl, jackdaw, and bird of paradise.'

'Yes,' she said, looking round at him with a languid smile. 'It is a pity. The pleasantest

times come to an end. The house will be dull for a little time to come.'

'Yes,' said Val, 'I suppose so.'—She went on playing softly.—'Those dancing chips,' he quoted, 'o'er whom thy fingers walk with gentle gait.'

'How quaintly pretty!'

—she said, looking round again. 'Whose is that?'

'It is from one of Shakespeare's sonnets,' he answered. He longed to speak the whole of it, but had not courage. The mere want of daring to do so little, spurred him, and stung him so that in a second he was ready to do all. 'Constance!' he murmured, and she turned again and looked at him. Her face was suddenly pale, and there was a visible fear in her beautiful eyes. 'I cannot go away without a word.' Her eyes drooped as his gazed passionately into them; the blood surged up to her face and left it pale again. 'If you loved the man you are pledged to marry'—the floodgates once open ever so little, farewell restraint—'I could not speak. How dare I? But you do not love him, and it is no dishonour in me that I plead my cause. I have loved you from the hour when I first saw you. I tried to go away. The telegrams that came a fortnight ago were sent at my request, to call me to London, away from you. I went; but I could not stay. My heart dragged me back again. I cannot live without you.'

She rose, pale and trembling, and stood before him. 'By what right,' she asked, still with lowered eyes, 'do you speak to me so? Might it not have been more honourable to have made your first appeal to Gerard—to your friend?'

He turned ghastly pale at that rebuke, and the room whirled round with him. He reached out a pair of trembling hands and seized on the piano.

'No, no!' she said. 'I did not mean to be so cruel. Go! Forgive me. Leave me. You must never speak such words to me again. Let us never meet again, for pity's sake.'

He looked at her doggedly, seeing her as if through a shining mist. 'You love me,' he said, 'and not Gerard.'

At that instant, Reginald's voice was heard below calling 'Constance!' With one sweeping gesture, she commanded him from the room. He passed out at one door; and she, with a motion that seemed the mere continuation of her gesture, left by another. But as they went, each gave a backward glance, and again their eyes met. 'Constance!' cried the voice below. She waved her hand once more against him, and was gone. He passed upward to his own chamber.

'She loves me,' he murmured. 'I shall win her yet!'

(To be continued.)

TWO STARTLING ADVENTURES.

NEARLY forty years ago, I was in the habit, during my school holidays, of spending a long time at certain intervals with my grandfather, who was an eminent surgeon living in a small town in Suffolk. I was a great favourite of his, and consequently began to look on his house as a sort of second home. One day, I regret to say the old gentleman whilst going his rounds caught a severe cold, which confined him to bed, but from which he anticipated nothing serious. Unfortunately, however, to our great

sorrow, his illness proved more serious than at first expected, and in a few days the poor old gentleman was no more. I went from home with my parents, a distance of thirty-two miles, to attend the funeral. The distance in those days being too great to admit of our returning the same day, we were compelled to stay the night after the funeral at the house. As the space in the house was rather limited, I was asked if I should be afraid to sleep in the bed in which my grandfather died; an idea which I indignantly repudiated. It was forthwith arranged that I should pass the night in that room. In justice to those who suggested the idea of my being afraid, I ought to say that that part of Suffolk was intensely superstitious, and that, considering I was only a boy of fourteen, my consenting to sleep in the room was, under the circumstances, somewhat courageous. I retired to rest at the usual time, no doubt with my thoughts full of stories I had heard or read about ghosts and ghostly visitants. I turned my attention to the bed on which I was to spend the ensuing hours, as I fondly hoped, in sweet oblivion. It was a huge old-fashioned four-poster, with heavy curtains hung on rings, which rattled with every movement of the bed, and was, at the time of which I am writing, a highly aristocratic bedstead; but considering all the attendant circumstances, its funereal appearance was not calculated to inspire my youthful breast with any but the most dismal sensations.

I undressed and got into bed, devoutly hoping that my slumbers might not be disturbed by the appearance of any spiritual visitor. The curtains near the head of the bedstead being partially drawn, by turning my head in either direction, my gaze rested on them. At that time, there was nothing equivalent to our modern night-lights, and save for the reflection of the fire in the grate, my room was in darkness. These curtains seemed, to my already half-terrified fancies, to be hiding-places for any number of ghosts, all ready to confront me, the moment I should be rash enough to throw off my earthly cares and commit myself to the arms of Morpheus. However, I at last fell asleep.

My repose was of a troubled nature. I fancied I heard strange noises in the room, but at anyrate I awoke after being asleep a short time—I suppose about two or three o'clock in the morning, fancying I heard the curtain rings rattling. I thought it must be my agitated state of mind which caused this idea. Imagine, then, my horror and fright when I saw, by the faint glimmer of the now expiring fire, that the curtain on one side of the bed was being forcibly jerked aside by some unseen hand. I trembled from head to foot, and cowered beneath the blankets, expecting I hardly knew what. Again and again did this unseen hand jerk the curtain. It could not have been a trick of the imagination. I was unable to cry out even if I had been inclined to do so. At last, after having given about half-a-dozen angry jerks, ineffectually as regards pulling the curtain aside, I was left to enjoy such rest as I could reasonably expect to get before morning.

Never was daylight more eagerly welcomed by anybody than it was by me that morning. With the earliest dawn I sprang out of bed—feeling braver than I had done a few hours

before—and proceeded first to dress, and then to examine my room, in order to ascertain if possible by what means my ghostly visitor had made his entrance and exit. The door, being hidden from my view when in bed by the curtain, presented itself as the most probable means. I examined it as well as my agitated state of mind would permit. Nothing, however, appeared to show any signs of my visitor's entrance. It was securely locked, as I left it the night before; and there was no sliding panel or anything of the sort which could have admitted anybody. I then turned towards the window; but that too was fastened; and I confess I gave the affair up as incomprehensible.

I went down-stairs more thoroughly impressed with regard to eerie visitants than I remember ever to have been before. My preoccupied air—for I was debating whether or not to mention my adventure—attracted attention, and drew forth many questions, to all which I replied with very guarded answers. At last I told the whole story, adding that I had never believed in ghosts before, and should like to find out the truth of this one. My story seemed to them incredible. But at last, in spite of the solemn proceedings we had witnessed the day before, a smile stole over the face of my grandmother. It was quickly suppressed, and she said: 'I think I can explain the mystery, young gentleman; let us come and try.'

We all followed the old lady up-stairs into the room where I had passed the night. She went to the side of the bed and pointed to the curtain rings. We then saw the explanation of the whole matter, which was as follows.

My grandfather was, as I have said, very celebrated in his day, and consequently had a large practice. His night-bell—in order not to disturb the other inmates of the house—was hung in his room close by his side. When the old gentleman was taken ill, absolute silence was enjoined. This bell, therefore, was taken down, and the wire fastened to the curtain rings. On the night in question, some young men, strangers in the place, and consequently ignorant of my grandfather's illness and death, were going home rather noisily at the somewhat early hour at which my adventure took place. Being bent on mischief, they commenced pulling the night-bell handle, in order, as they no doubt observed, 'to rouse the old gentleman.' Every pull, therefore, gave a corresponding tug at the curtains; hence my terror and fright in thinking that some unearthly visitor was in my room, trying to pull them aside. My mind was set completely at rest by this simple explanation; and I went home that day fully convinced that there is a reason to be found, if one will only try, for the specious ghost stories which foolish people constantly publish for the benefit of the ignorant and credulous.

My other adventure, which happened some years before the one I have just related, was not of so startling a nature. At the same time, it was calculated, young as I was, to cause me a considerable amount of uneasiness. I was staying at the same house during my grandfather's lifetime. Being a mere child, I was of course not permitted to stay up late by my worthy grandmother, who used to send me to bed about seven o'clock. One night I had gone to bed in the room

I usually occupied; and on awaking in the morning, I found that everything in the room had changed! I could not account for it. I was not a sleep-walker; but here I was ensconced in another bed, with my clothes neatly folded up at the foot. I tried to run over the events of the preceding day; but though I remembered everything that had occurred, I could think of nothing which might account for this extraordinary metamorphosis.

When the time came for getting up—which I knew by hearing the old clock on the stairs—I rose and dressed. On going out of my room, I perceived that I had been removed in some way during my sleep. I was quite at a loss to understand how. However, the mystery was soon explained. After I had gone to bed, an old friend of my grandfather's had arrived unexpectedly with his wife. They had calculated on stopping the night, and the only room available for the worthy couple was that in which I was asleep. After much deliberation, it was arranged that I should be turned out, to make room for them. On going to my room to awake me, I was found fast asleep. My grandmother, a kindly old dame, proposed removing me if possible without awaking me, which was, as she said, a pity. Forgetful, therefore, of the probable consequences, the old lady took me in her arms, and deposited me safely in the bed in which I found myself in the morning. Although this was done with the best intentions, yet it was, I think, a rash proceeding, as the results in the case of a sensitive child might have been serious.

I think that these two adventures serve to show that however improbable an event may be at the time, there is generally an explanation to be found for it, without ignorantly and foolishly attributing it to supernatural agency. I consider that the present mania for so doing is calculated to do an immense amount of harm, especially to the young and ignorant.

SETTING THE SNARES.

CHAPTER VII.

AFTER a brisk canter, and while the sun was still above the horizon, Arthur and Rachel were returning from the ride mentioned in our last chapter, when just as they reached a hollow or 'dip' in the ground at no great distance from the farm, Rachel exclaimed: 'There is a man on horseback making signals to us. See! there he is, by that patch of cotton-wood trees.'

Arthur looked in the direction indicated; and there, surely enough, was a man waving his hat, as he rode briskly towards them. They reined up; and in a couple of minutes the man, who was a stranger, came alongside. 'Say!' he cried; 'air you Squire Arthur from the Holt Ranche?'

Arthur replied in the affirmative.

'Then, boss, Squire Holt wants you to meet him at the Ogley Ranche, as soon as you can.'

'At the Ogley Ranche!' echoed Arthur, in surprise. 'Why does he wish me to join him there?'

'Guess that ain't none of my business,' said the man sulkily; 'and it ain't none of my business whether you go there, or whether you

don't. But I reckon I heard him talking about the reason; he has concluded to buy a piece of land away in the hills. The man that belongs to it has come down about it, and Squire Holt proposes to stay at Ogley's to-night, and go on fresh in the morning.'

'It is very curious'—began Arthur.

But the stranger interrupted him. 'Wal, boss,' said he, 'it ain't no affair of mine. When Squire Holt found I was going past the Gaisford Rancho, he asked me to call and tell you, but said I might cross the track of you and Miss there, and to do so, if I could, as he wanted you at once. I've done it; I've earned the two dollars he paid me, and I don't care a single cent what comes of it.' With this the man struck his heels into the pony's side; and ere Arthur could fairly make up his mind what to say, he was beyond hearing.

'I suppose I must go,' said Arthur ruefully; 'but it will be dark long before I get to the Ogley Rancho.'

'I did not like the look of that stranger,' said Rachel. 'I noticed that he would never meet your eye. I cannot think why he should deceive us; but you ought to ride over to Mr Holt and learn if the message was genuine.'

'It would take me as long to get to the rancho and back to this place, as it would to ride to Ogley's,' replied Arthur; 'so I should have all the bad part of my ride in the dark, and perhaps offend my uncle. No; there can be no great harm in obeying. So good-bye, Rachel,' he said, as they shook hands; 'and tell your father why I have not returned.'

Arthur, as he reached the crest of the swell on his side of the hollow, turned for a moment to wave his cap; then he vanished, and Rachel rode slowly home.

Mr Gaisford met Rachel as she rode up to the door of the farmhouse, and naturally asked what had become of Arthur. On learning what had occurred, he expressed considerable surprise, as he had heard nothing of Mr Holt's intention to buy land in the vicinity of Ogley Rancho. He smiled, however, at Rachel's strongly expressed dislike of the messenger, and said that out West it did not do to be too particular.

While they were speaking, their old Mexican woman-servant Carlota came out from her dairy.

'Señorita Rachel!' exclaimed Carlota, 'what is that you say? Señor Arturo gone up to Ogley's Rancho?—that very bad thing.'

Hereupon the farmer, as if suddenly recollecting himself, said to Rachel: 'Oh, I remember now that Carlota came to me to-day, asking very anxiously if I had seen Mr Arthur; and on hearing that he was out with you, she seemed more satisfied.'

'Yes,' continued Carlota, who had attentively listened to the farmer; 'I think Señor Arturo safe then. But now he is murdered.'

'What!' ejaculated the farmer.

'Merciful heaven! what do you mean?' cried Rachel, the colour deserting her face; yet, as she spoke, she felt that Carlota's words did but carry the realisation of a dreadful fear which had haunted her from the moment she parted with Arthur.

'Cipriano! Cipriano! come here!' screamed Carlota. In obedience to this summons, a young

Mexican, her nephew, presented himself. 'Now, Cipriano,' began Carlota, 'you tell to the Señorita what you have hear about Señor Arturo!'

The Mexican spoke very briefly and to the point. He said that Cuervo the Uté captain had met him, and warned him that men were lying in wait to shoot Señor Arturo, if they could get him near the hills that night; that these men, were a white, and two 'bad' Apachés; and that Arthur was on no account to ride out to the mountains alone. He was to say also that some attempt would be made to decoy him there by a feigned message from his uncle.

Gaisford paused for an instant; and then, with the air of a man accustomed to act promptly, exclaimed: 'I see it all!—Ride, Rachel, to the Holt Rancho; tell them to send every man they can muster, well armed, through the gulches to Ogley's Rancho.'

'No, father; send some one else,' cried Rachel, as she shook the reins of the pony and prepared to ride off. 'I shall follow Arthur. He cannot be above a few miles up the pass, and I may overtake him before any danger happens.' And before her father could reply, she was off on her swift little steed.

The sun was already out of sight, and twilight, beautiful but short-lived, was setting in.

'Bring up three horses!' shouted the farmer to one of his men who just then came in sight.—'Carlota! I will ride with this man and Cipriano to the ford, and meet Texas Dick. You can tell the others as they come in where we are gone to; and send them on, as soon as they can get mounted, to Ogley's Rancho. I will fetch the weapons.' Saying this, the farmer entered the house, leaving Carlota and the young Mexican intently watching the progress of Miss Rachel.

'Golly! how Señorita Rachel is riding!' exclaimed Cipriano presently. 'But the pony splash very little water at the creek. By thunder! she have swim through, to save time. She mucha brave girl. The creek twenty foot deep there.'

It was even so; and the farmer, who had just emerged, laden with firearms, knowing the deep, treacherous holes of all the streams in the vicinity, turned pale as he saw his daughter plunge through the 'creek' at a spot dreaded for its danger, evidently doing this to save the time which would be consumed in riding round by the ford. She emerged safely, however, on the other side, and rode swiftly away.

'Now mount, Cipriano!—And you, Ned,' continued Gaisford, as the horses were led up; 'here are rifles and cartridges.—Send on the other men, Carlota, as I told you.—Now, boys, are you ready?—Off with you!'

The party started at a sharp trot, taking a line somewhat different from that followed by Rachel, as their aim, in the first instance, was to meet Texas Dick and his men, who, they knew, would remain at work at the new corral until sundown.

Little was said; but many an anxious glance was cast towards the distant foot-hills, until a group of five or six men, easily to be recognised as Texas Dick and his assistants, came in view on the further side of the creek. A piercing 'halloo' from the farmer drew the attention of

this party; and some signals were made which convinced the Texan that he was wanted; and so, without losing time in debate, he and his comrades quickened their pace, crossed the ford, and were soon alongside the farmer. A very few sentences sufficed to convey the position of affairs to the frontiersman; then, with merely an ejaculation of 'Come on, boys!' he turned his horse's head, and followed by his men, rode off at once in the direction of the hills.

'I told you I saw a white man in company with some Apaches,' said Dick, as they pushed on. The farmer assented. 'Wal,' continued the Texan, 'that white man has been seen with them again; and one of our boys saw him with old Seth Birrable the post-master.'

'Me see strange white man slink into back of post-office this afternoon,' said the Mexican; 'then he run out of front, and hide and creep in bush till he get away.'

'That Birrable is a bad un,' said the farmer.

'That is so,' assented Dick; 'and if any harm comes of this business to Mr Arthur, we will lynch him. I had a good mind to take him out to a tree last winter, for I know he was in those horse-robberies. But this time we will string him up for sure.'

A low murmur of approval from his hearers followed this speech; and the party rode on in silence.

The twilight was now beginning to thicken in the distance, shortening the perspective; and as if spurred on by the nearness of night, both horses and men bent to their work with a vigour. They were going over the rough ground with wonderful speed. All at once the Texan, keenly scanning the country towards the hills, suddenly exclaimed, pointing to an open patch which lay between two jutting piles of rocks and mounds: 'By snakes! there's Señor Arthur! You see his gray horse?'

One or two others of the party declared they could just make out in the dim light the figure of a horseman; but from the distance, it was impossible to feel certain. Dick was positive, however, and rising in his stirrup, he gave a loud and peculiar halloo.

'He heard me!' cried the Texan. 'I saw him turn his horse round. Now he goes on again.' A second time the shrill halloo arose; but it was impossible to decide whether the sound reached the rider or not.

Suddenly Cipriano the Mexican cried: 'Señor Gaisford! there is firing in the foot-hills. I hear a shot just now.'

'The Mexican is right!' exclaimed Dick, after a brief, painful pause. 'I heard shots again.—Push on, boys! Don't spare your horses!'

Nor did they; and the ground being fortunately level in itself, although of course with an upward slope, they made rapid progress. They had approached nearly to the last spur forming the boundary of the broken country, and were about to enter the pass into which they had seen Arthur ride, when suddenly they heard several other shots fired, and were even near enough to see the flashes.

'Give a shout, boys!' said the Texan; 'it will cheer our friends and frighten our enemies. Now for it!'

The 'boys' complied, and two or three tremen-

dous yells rang through the night, which must have penetrated far beyond the cañon from which the firing proceeded.

CHAPTER VIII.—CONCLUSION.

It was indeed Arthur whom Texas Dick had seen a few minutes before entering the defile far ahead of them. Till then, the young Englishman's ride had been quite uneventful, and the only cause for anxiety which occurred to him was the rapid approach of nightfall while he had still the roughest and most uneven portion of his route before him. As he rode into the defile through which he was now passing, the twilight became deeper, from the narrowness of the pass and the height of the rocks on each side of him. He had therefore to concentrate his attention on the difficult path over which his horse was picking its way; and it was only after he had ridden right into the pass that something startled him, and he looked eagerly up and around. His quick eye made him fancy that he saw something move where the shadows were darkest, and he shouted to know if any human being were there. For a moment, as he listened, there was no response, no murmur, no flap of night-hawk's wing to break the gloomy silence; then, all at once, a flash lit up the rocks just in front of him, and a report followed. Instantly he drew his own revolver, but as he did so, two more bright flashes dazzled him; a stunning shock told him he was hit, while his horse fell dead under him, shot through the head.

When Arthur and his horse fell, three heads, cautiously lifted above a parapet of rock, witnessed the effect of the volley.

'Bueno! my boys!' exclaimed one, a white man—Señor Tony; 'he is down; but I doubt if he is dead. Hurry to him; finish your work, and the fifty dollars and the keg are yours to-night.'

The Indians gave a grunt of assent, and springing to their feet, were emerging from the rocks behind which they stood, when Pedro stopped as suddenly as though he had been petrified.

'What is the matter?' exclaimed the impatient white man. 'Lose no time, or he will recover, and give us trouble.'

'Oye! Listen!' said Pedro. 'Cavallos!—horses come!'

Tony listened. He heard, surely enough, the gallop of a horse, and at the rate it was travelling, it was plain it would be within the defile directly.

'There is only one,' whispered Tony. 'Fire as he comes out of the shade.' But the Indians either considered that this was not in the bond, or, as was more likely, were unwilling to run any fresh risks; so the party listened to the gallop of the rapidly approaching rider. As they did so, to Tony's alarm he heard Arthur groan and move; signs that he was regaining his consciousness.

'Another moment,' he muttered, 'and he will be on his feet, and ready to fight.'

The deadened clatter of the horse's hoofs as it came through the gorge was now changed to a clearer ring; the rider had gained the open space, and was free from the close reverberation of the rocky pass.

'What do I see?' exclaimed Tony. 'A woman! Rachel!' Next moment, turning to the Indians, he said: 'Don't hurt her; but take her horse, so that she can't hurry back. The fond fool! to come here.'

In the meantime, Rachel had come near enough to see the prostrate figures of Arthur and the horse. With a slight and instantly repressed scream, she reined up, and leaped from her pony. The Indians, who had now cleared the ridge, gave a hideous shout and rushed down the slope towards her; but the delay, brief as it had been, was fatal to their purpose. Their shout was answered with whoops from the opposite side of the gorge, and three flashes at once broke forth from the darkness behind the girl, and the bullets which followed them struck the rocks against which the Apaches could be seen descending. The Indians immediately turned and fled, disappearing in an instant among the rocks.

Before Rachel had time to realise the terrible situation in which she stood, she heard a deep guttural voice behind her exclaim: 'Señorita Rachel, yo Cuervo!' [I am Cuervo!]

'Thank heaven!' cried the girl, as she turned round and saw the friendly Uté. 'Oh, come to me, Cuervo; Señor Arthur is dying!'

The next instant, Cuervo and his two stalwart sons were by her side, assisting to disengage Arthur from his dead horse. The young man was able to speak as they did so, and to assure Rachel that he was not seriously hurt.

As he spoke, the sudden clatter of a body of horse was heard upon the stony ground close by; and then, with loud shouts, the party under the farmer and Texas Dick rode up. The men immediately dismounted; lights were struck, and Rachel was in the arms of her father. It seemed that the courage which had sustained her so long, deserted her all at once, for she clung to her father and sobbed hysterically.

There was little time, however, for the indulgence of sentiment, because, as Texas Dick said: 'There ain't no telling where the scallawags may be, or how many of 'em. First thing we know may be a shot, so we will make tracks.'

The dead horse having been quickly stripped of its saddle and headgear, and Arthur mounted behind one of the party, Cuervo and his sons being similarly accommodated, they at once rode off.

All this took place in a fraction of the time required for its narration; and it was not till the party had got out of reach of further attack, that Cuervo began to explain how he had arrived so opportunely. Reducing his narrative to the plainest and briefest form, it appeared that he had long been expecting some such attack upon Arthur, as he had seen Señor Tony in company with two Apaches when the rest of the tribe were on the hunt; and these Apaches being frequently intoxicated, had dropped words which fired the suspicions of Cuervo. He had learned enough to assure him that Arthur would be waylaid on a particular night, which, as the reader will guess, was the night when the Uté had presented himself with his sons so unexpectedly, and acted as body-guard to Arthur until the latter was in safety. On this present day, Cuervo

and his sons had been in the foot-hills, where they discovered Tony in consultation with the Apaches. Lurking behind a convenient tree, Cuervo overheard that a plot was on foot to decoy Arthur thither that night and kill him. He accordingly went down into the plains, and meeting Cipriano, who, he knew, was often at the Gaisford Rancho, gave him the message which the Mexican had faithfully tried to deliver; then returning, the Utés determined to watch Tony and his confederates.

Not daring to follow the latter too closely, Cuervo had slightly mistaken the direction in which they entered the broken country, so was for a time thrown out. He and his sons, however, had a pretty sure guess as to the spot where the ambuscade would be laid, and they had just worked their way to its vicinity when they heard the first shots. Directly afterwards, Miss Rachel passed them, galloping in the direction of the firing. They followed her, and would have been by her side in a couple of minutes; but the whoop of the Apaches, as they descended the rocks, told to Indian ears that no time was to be lost, and that even the two minutes could not be risked. So they fired as truly as they could in the direction of Tony's yelling accomplices.

Rachel's arrival had clearly saved Arthur's life, by alarming the suspicious Apaches. But for this, even Cuervo's intervention would have been too late. Arthur, in spite of his wound—for he had experienced a very narrow escape, a bullet having ploughed its track along his scalp—found an opportunity for saying as much to Rachel, as they rode through the darkness towards the Holt Rancho, where they arrived to find the farmer lost in wonder as to where Dick and his men could be gone.

On hearing details of the expedition, Mr Holt became excessively wroth, and vowed he would not rest until the mean trash of whites and the bad Indians were hunted out of the neighbourhood.

'They say this white man is known; in fact, it's certain,' interposed Texas Dick, on his employer pausing for an instant.

'Who is he?' demanded the farmer. 'If he's alive in the territory after to-morrow, he will have to hide pretty close, for I'll hunt him as if he was a wild-cat.'

'Wal, then, it's your other nephew, Tony,' said Dick bluntly. 'There's a good many of the boys who mean to draw a trigger on him at sight, so you can leave him to them.'

Holt was literally staggered at hearing this, for he reeled and caught at a chair. 'If he were ten times my nephew,' he exclaimed at last, after a pause which was very painful to every one present, 'he dies if I meet him.—But tell me now, some of you, what ground you have for saying this murderer was Anthony Derring.'

This testimony was soon forthcoming; and it appeared from the remarks made during the narration, that the young man in question had once been a resident at the Holt Rancho, where he was high in favour with the farmer, and looked upon himself, there was little doubt, as Mr Holt's destined heir. His conduct, however, had grown very bad, far exceeding, indeed, the tolerably wide latitude allowed 'out West'; and finally, being conclusively proved to have taken part in

a serious robbery, while he was suspected of an attempt to waylay Mr Holt himself, the farmer dismissed him, with a handsome present, however, to keep him from the necessity of resorting to evil courses. It was indeed to supply his place, that Mr Holt had written for Arthur.

Tony had probably thought that his banishment would not last long; but when he found a successor to himself installed at the ranche, he considered that the situation had grown more serious, and that his only chance of restoration to favour lay in his getting rid of the interloper, and keeping his own share in the blood-guiltiness a secret from his uncle. This achieved, it was highly probable that if Tony presented himself apologetic and penitent at the nick of time, the farmer would relent, and all would be well.

One sentiment seemed to pervade the whole of the men, and this was, that Birrable the postmaster was a dangerous character who must be cleared out. In this connection, it will be sufficient to observe that Birrable must either have received warning or taken fright; for on the very next morning his office was found to be closed when the mail-cart came in, and he himself was never seen or heard of again—unless indeed the report of a man from the Nevada mines could be relied on. This man came into the neighbourhood a year or so later, and declared that he had assisted at the 'lynching' of Birrable, who, under another name, had been a source of trouble at the narrator's mining-camp for many months.

Meanwhile, Squire Holt did not slacken in his anger or turn from his purpose; he lost no time in advising the 'boys' of the district, of Tony's plot to decoy and murder Arthur Richmond; and a hot pursuit was instituted in quest of the messenger who brought the false instructions to Arthur, Birrable the postmaster, and Tony himself. But vain was the search in each case. Birrable had fled, as already explained; the messenger was a stranger; while the closest inquiry for fifty miles round revealed no trace of Tony. But some months afterwards, when all interest in the pursuit had flagged, and Tony's doings and himself were in a fair way of being forgotten, a horrible story, told by some men who had been recently through the Indian territory, brought him vividly to every mind.

These men camped in the vicinity of the Gaisford Ranche, to rest their cattle for a day or two, and told how they had seen Miguel the Apache, whom they knew, in company with some other men of his tribe. These Indians had a good deal of money, and traded with the white men who now told the story. It possibly happened in the course of this trading that some whisky changed hands; at anyrate, Miguel got intoxicated, and in his drunken bravado exhibited a scalp, not long taken from its owner's head, which he boasted was the scalp of a white man, 'mucho big chief.' He also showed various trophies, amongst others a leathern purse, which, he boasted, had been full of dollars. And inside this was written, 'Anthony Derring.' Miguel, being in the loquacious mood of drunkenness, although usually the most silent of Indians, explained that this 'hombre Americano' [this Yankee man] had shot his brother Pedro; that he, Miguel, had dragged the body away, and

shown it to the captains of his tribe, and these had followed the murderer, and duly revenged the slaughter of their comrade.

Thus perished Señor Tony; at all events, if the report of the traders were untrue, he never appeared to contradict it; while one or two articles, known to have belonged to the young man, were at various times seen in the possession of some of the Apache squaws.

It was not long after the events related, that Mr Holt, being thoroughly satisfied with the fitness of Arthur to assist him, and, in short, having taken a very great liking to the young man, desired him to send for his mother and the remainder of her family; a summons which almost frightened Mrs Richmond to death, so terrible seemed the idea of crossing the Atlantic. But it was evident that she had virtually no choice; her son's letter was so earnest, the advice of her friends was so emphatic, the advantages of the removal so unmistakable, that she was compelled to go, although with much gloomy presentiment, and with many sighs and tears. She found, as others before her have found, that the making up her mind was the worst part of the business, and that it was possible even for her to survive a long sea-voyage.

'We shall see a great change in Arthur, I have no doubt,' she was fond of remarking to her eldest daughter as the ship shortened the distance between them and him. She was more correct in this than even she herself supposed. At anyrate, with all her presentiments, and with all her belief in the change that a foreign life must have worked in her son, she was not quite prepared for his meeting her at Kansas City in company with an exceedingly pretty young lady, or for the pretty speech: 'Mother dear, this is my wife, Rachel. I am sure you will love her.'

This she did very soon, and very dearly. But as poor Mrs Richmond, dowager, often said, when in time to come she had found sympathising neighbours to whom she could say it—'When he said this, you really might have knocked me down with a feather.'

BOOK GOSSIP.

THERE are some people who spend every available hour which they can spare from other duties, in what is to them the delightful luxury of reading. They read in the morning, and they read in the evening; they read in company, and they read in solitude; they read within doors, and they read without doors; they read at board, and they read in bed. Walking and reading, also, are two performances often carried on conjointly, though the practice is not to be commended as good in any sense; but less fault is to be found with that other practice of pulling out a book and perusing it while we rest during our walk. To those who indulge in this habit, neat small editions—literally 'pocket editions'—of good works are always acceptable; and to such we would commend what is called 'The Familiar Quotations Series of Books,' published by Whittaker & Co., London. This series, besides those volumes which give it

its title, such as *Familiar Latin and French Quotations*, &c., contains a number of well-known and interesting books. There are, for instance, Charles Lamb's *Tales from Shakespeare*; J. B. Selkirk's *Bible Truths with Shakespearean Parallels*; Dr Johnson's philosophical romance of the Abyssinian prince, *Rasselas*; De Quincey's wonderful *Confessions of an English Opium-eater*; and many others. The volumes are small and handy in form, printed in good type, and cheap—three qualities which should commend them to many readers, especially those of the pedestrian order.

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Of all games in this country, Bowling, as practised out of doors, is among the most innocent and least harmful, in every sense. Yet this agreeable pastime as practised indoors had at one time a very bad name, so much so, that certain Acts of parliament had to be launched against it. Nor were even these discharges of legal artillery sufficient to check the evils of gambling with which the fair character of the game had become tainted. In the time of Henry VIII. the game was classed among unlawful amusements, and bowling-alleys were proscribed by statutes which were directed against all who either played in such places or kept them for profit. It was allowable, however, for artisans and servants to play at the game during Christmas-time in their masters' houses and presence; while persons who were worth more than one hundred pounds per annum might obtain a license for playing within their own domain. But notwithstanding these restrictions the game still retained its popularity, and worked as much evil as before. Writing some forty years after the above Acts were passed, an English author says that 'common bowling-alleys are privy moths that eat up the credit of many idle citizens, whose gains at home are not able to weigh down their losses abroad; whose shops are so far from maintaining their play, that their wives and children cry out for bread, and go to bed supperless often in the year.'

The game, however, as practised in the open air, has long since cleared itself of any such stigma as anciently attached to its indoor cousin, and is now, as already said, as much dissociated from any idea of vicious betting or gambling as any game of skill can possibly be. For those who are unable to engage in the more active athletic exercises, bowling is at once a safe and an agreeable recreation, as is testified by its numerous votaries, who derive pleasure and mild relaxation from the pastime. Like other games of skill, it has its code of laws, written and unwritten; and a knowledge of these laws by the frequenters of bowling-greens and by members of bowling-clubs, is the best preventive of misunderstandings, and saves the unnecessary cropping-up of 'disputed ends.' An excellent little book on the laws and rules of the game is the *Manual of Bowl-playing*, by W. W. Mitchell, Millport (London and Manchester: John Heywood). It contains the laws of the game, rules for bowling-clubs, suggestions for the making and keeping of greens, and an appendix giving the results of the chief tournaments and matches during the last few years. The little book pre-

tends to nothing beyond being a useful and handy guide to the game of bowling, and in so doing it pretends to nothing more than its contents will justify.

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We have from time to time drawn the attention of our readers to the publication of books intended for the simplification and advancement of science-knowledge; and in this category of useful and compendious works must be classed that of Dr Andrew Wilson, F.R.S.E., entitled *Leaves from a Naturalist's Note-book* (London: Chatto and Windus). The book, as the author points out, is made up of a series of sketches, compiled chiefly because of the existence of a growing taste on the part of the cultured public for a knowledge of the objects in which the naturalist professes an interest. While such books are essentially imperfect in point of fullness and exhaustiveness, they at the same time serve a purpose which more full and exhaustive treatises would fail to accomplish, in so far as they engage the interest of the non-scientific reader, and may in many cases lead the way and prepare the mind for higher scientific studies. In consistency with the object which the author had in view, there is nothing in this little volume which any reader of average intelligence might not comprehend, while there is much which even readers of some degree of scientific culture will heartily appreciate and enjoy. In addition to chapters devoted to such subjects as jelly-fishes, the 'threads and thrums' of spider-existence, skates and rays, whales and their neighbours, kangaroos, barnacles, and flies, there are papers of a more general kind, treating of such subjects as the office of science in the elucidation of crime and the conviction of the criminals; the exposure of medical quackery; scientific ghosts; food and fasting, and the like. The diversity, within certain limits, of the subjects treated in the book is such as to render it scarcely possible for any one to take it up even for a few spare minutes without finding something to interest, instruct, or amuse.

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John B. Gough is well remembered in this country as one of the most powerful lecturers that ever spoke on the subject of temperance. At the time of this American orator's first propaganda, the effect of his prelections here was marvellous; and if, on his second visit to this country a few years ago, he filled a less distinguished position in the public mind, this was due not so much to any falling-off of power in the orator, as to the fact that temperance agencies and temperance arguments are much more common and better understood now than they were twenty-five years ago. Since his return to America, two years since, Mr Gough has been engaged in writing an account of his life-work, embracing the experience of thirty-seven years on the platform and among the people at home and abroad. The book deals largely with his experiences in this country in 1878, and with the various prominent temperance advocates whom he met in London and elsewhere. Much of the book is taken up with sketches of London life, some of them exceedingly graphic, many of the anecdotes told being pointed and

amusing. There is a story referring to the tricks of professional beggars. A man was standing with a board in front of him, with the inscription, 'I am blind,' when a gentleman threw a shilling on the ground; the blind man instantly picked it up. The gentleman said: 'Why, I thought you were blind.' The fellow, after a moment's hesitation, looked at the board, and then said: 'I'm bless'd if they haven't made a mistake, and put a wrong board on me this morning! I'm deaf and dumb!'

THE MONTH.

SCIENCE AND ARTS.

THE Suez Canal, which represents the greatest engineering triumph of the present century, is found to be inadequate for its designed purposes. The traffic at present amounts to three million tons of shipping annually; and owing to the development of Chinese and Australian commerce and to other causes, it is constantly on the increase. As many as fifty ships are occasionally threading the passage of the Canal at one time; and when it is remembered that these vessels can only pass one another at certain points—like railway trains on a single line of metals—it can be imagined what tedious and costly delays are constantly the rule. These difficulties form the subject of a highly interesting contribution to the *Times* newspaper from a correspondent, who has gone over the ground with a view to noting them and suggesting possible remedies. He points out that the plan of widening the waterway throughout would be inadvisable, on account of the enormous expense which it would entail; and dwells rather on the recommendation that the *gares* or passing stations should be greatly increased in number. He also advises that the stone casing of the banks—at present in progress—to prevent the sandy sides shelving into the water, should be actively pushed on, so that ships, which are now limited to a certain speed, could travel through more quickly without any risk of injury to the banks from their wash. He finally suggests that the Canal should be bought up by the different nations using it, instead of being left in the hands of a private Company. England would have to pay the lion's share; for her ships are as four to one of those which pass under other flags.

Another international highway—the Tunnel beneath the English Channel—continues to excite lively interest both among engineers and politicians. There is one difficulty to be surmounted, peculiar to all similar works of excavation, and that is, the question of efficient ventilation. Some statistics were recently brought before the German Society of Engineers bearing upon the ventilation of the St Gothard Tunnel, from which it appears that in spite of its mountainous position, where the outside air must be of the purest description, the workmen suffered severely from the rapid deterioration of the air which they breathed. In the Mont Cenis Tunnel, things seem to be quite as bad; for the engine-men are furnished with mouth-tubes, through which they can breathe from a reservoir of fresh air which they carry with them. With these facts in view, it would seem that if the Channel Tunnel below the bottom of the sea is ever completed, the chief

problem in turning it to practical account will remain to be solved.

It would appear that London with all its smoke, and consequent fog, is a far more healthful city to dwell in than Paris with its noted clear atmosphere. The chief of the Prefecture of the Seine, Dr Bertillon, recently issued some statistics showing that the Paris death-rate—which ought, from the small proportion of young children and elderly persons, to be considerably lower than that of the British Metropolis—is in reality much higher. After making allowance for the difference of age-constitution in the population of the two places, we find that for every hundred deaths in London, the Parisians register one hundred and twenty-eight. From these figures we may judge that whatever things they may do in France better than we do, they must be behind us in sanitary matters.

M. Muntz assures us of the somewhat startling fact that all natural water contains alcohol, though in an infinitesimal proportion. In river-water the proportion is about one-thousandth; in sea-water about the same; but in cold rain-water the proportion of spirit is rather greater. Though we have on a former occasion hinted at the presence of alcohol in pure cold water, M. Muntz is said to have confirmed it by means of apparatus which he has specially devised for the purpose.

The impetus given to gas illumination by the serious competition of electricity has borne fruit in the substitution of brilliant lamps in many of the London thoroughfares for the inefficient glimmering burners previously in use. Indeed, it has often been remarked that we never knew what gas could do for us in this way until electricity threatened to beat it out of the field. A new form of gas-light, the 'regenerative' burner of Messrs Siemens, is now on its trial in Holborn; and judging from the effect obtained, its success is assured. In this lamp, the products of combustion, instead of passing away as waste vapour, are again passed through the flame. In this way the burner is not only constantly fed with a supply of warm air of its own creation, but every particle of the illuminating portion of the gas is consumed, and therefore turned to the best account. A very bright light is thus secured with a minimum consumption of gas.

Professor Ayerton's lecture on Electric Railways before the Royal Institution dealt with much that must have been new to the majority of his hearers. After stating that the whole question was one of cost, and depended upon whether electric transmission of power could be made cheaper than any other known system, he proceeded to point out various disadvantages attached to existing railways. The weight of a locomotive equals that of six carriages loaded with passengers, so that its mass adds fifty per cent. to the horsepower necessary to propel the carriages alone. This weight cannot be reduced, or the driving-wheels would fail to grip the rails. Another still more serious result of employing such a heavy motor as an ordinary engine is, that the line throughout—its bridges and all its parts—must be made of great strength, and consequently at much greater cost than if there were no locomotive to consider. The advantages of an electric motor are in comparison very great; for

experiment shows that for every fifty pound of dead-weight, one horse-power can be developed; a result to which neither steam, gas, nor compressed-air engines can attain. The few experimental electric railways already tried have been very limited in extent; the two rails acting as carriers of the current, and making connection with the motor through the wheels of the train. In such short lines, no great leakage occurred; but in long lines, the leakage from the rails to earth, and especially to moist earth, would prove most disastrous to success. Professor Ayrton proposes to obviate this difficulty of leakage by laying a well-insulated cable parallel with the rails to convey the main current. The rails would be divided into sections, and only that section upon which the train was actually running would be connected with the main cable, the connection being made by the moving train itself. By another device, it is proposed that the train should graphically record its exact position on a map at the terminus, or in a signal-box, as might be required. These various plans were demonstrated by a working model, which further showed that a complete block-system could be guaranteed. A moving train coming on to a blocked section of the line would not only stop, for want of propelling current, but would be automatically braked.

The celebrated photograph called the Trotting Horse, exhibiting an animal in different positions, some of which appear quite absurd, so contrary are they to all our preconceived ideas upon the subject, must be familiar to many of our readers. Mr Muybridge, the clever American photographer who produced it, has lately given an account of his manner of working both to the Royal Institution and the Royal Academy. His studio, he explained, was more like a racecourse than anything else, the grand stand being represented by a battery of twenty-four cameras. These cameras were connected by threads, breast high, and a foot apart, stretched across the course on which the horse had to gallop, or trot, as the case might be. As the horse broke each thread, the camera in connection did its instantaneous work; and a series of twenty-four pictures, giving the varied movements of the animal, was the result. By comparing these sun-pictures with the best-known productions of ancient and modern art, Mr Muybridge showed that many of our best artists have been in the habit of depicting animals in positions which they never assume in nature. But he did more than this. By a mechanical contrivance, the various photographs were projected by a lantern on a screen in such quick succession, that the trotting movement of the horse was brought before the astonished audiences in a life-like manner. Mr Muybridge proves that a horse galloping with all four feet off the ground at the same moment, is a simple impossibility. We need not point out that this is the way such an animal is invariably portrayed by even the best artists.

The use of the telephone seems to be steadily increasing, not only in this country, but in most of the European states. Its adoption at first by the public was very slow, for it represented a new-fangled contrivance, and this was quite enough to prevent a very large class from having anything to do with it. But its great value as a

means of communication soon became apparent to all, and the number of applicants for its aid is now very great. It is quite certain that the various British Telephone Companies do not offer the public all the advantages which they might easily do. In Germany, there are public telephone rooms where, on payment of a fee of five-pence, a passer-by can walk in and hold a conversation with any friend who may be a subscriber to the system. But in Switzerland, telephones are made far more generally useful than anywhere else. In Zurich, there are eleven public offices open to the use of all; attached to them is a Commission service, by which all kinds of messages and orders are executed for a very small fee. The central office is in direct communication with the telegraph system, so that a subscriber can dictate his message without the intervention of a third party; and in 1881 nearly nine thousand telegrams were transmitted in this manner. The Telephone Company also undertakes to wake its more sleepy subscribers at any hour which they like to appoint—an excellent idea.

Various endeavours have from time to time been made to get motive-power from the action of the waves; but such attempts have met with very small success. Mr Bigler, an American inventor, has contrived a buoy for use over sunken rocks or other dangerous spots, which carries a small dynamo-electric machine, set in motion by the rise and fall of the waves. The current of electricity so generated furnishes an Edison incandescent lamp with light. The action is of course intermittent; and the weak part of the contrivance seems to be the stoppage of the light on a dark but calm night. Without waves, the machine would not act, and the hidden danger would not be pointed out.

The destruction of the American pine forests is going on at such a rate, that it is calculated in some States they will be stripped of wood in as short a period as twelve years. The killing of the goose with the golden eggs was never better illustrated than in the short-sighted policy which allows this forest-land to be denuded of its trees without leaving any provision for the future. A few young trees planted here and there, and a very old one left to provide seed for successors, would have made a vast difference to the future prosperity of the districts indicated. But men have made too much haste to grow rich, and a timber famine at no very distant date must be the result. Another danger which has been forgotten is the risk of drought which the extensive removal of trees is known to induce.

A new musical instrument, the invention of Mr Baillie Hamilton, was recently experimented upon in the speech-room at Harrow School. It is of the harmonium type, in so far that its sounds are produced by vibrating metallic reeds; but the arrangement of these slips of metal comprises a very important modification. In the first place, the reeds are what are technically known as 'free'—that is to say, they can vibrate in and out of the frame in which they are set. These reeds are divided into groups of three, and each triplet is connected by a bridge. The effect of the arrangement is that a quality of tone approaching to that of the human voice is attained, and the rasping effect common to inferior harmoniums is altogether got rid of. The experiment was

certainly satisfactory; and when some little defects in the instrument have been corrected, it will form a dangerous rival to instruments of its class.

We fear that the adventurous gentlemen who have recently risked their lives in balloon journeys across the waters of the Channel, have not added very much to our scientific knowledge respecting aeronautics or atmospheric phenomena. They have merely proved that a north wind will carry them south, and that if they meet with a current in another direction, they must fain go with it. We can ill afford to risk the life of such a man as Colonel Burnaby, the Khiva hero; and we trust that he will not again attempt to travel to Paris *vid* cloudland unless he has some very potent reason for doing so. The balloon as simply an aerial machine has now been brought to great perfection; indeed, it is difficult to see how it can be further improved; but the wind is still its master.

The popular outcry against the removal of the elephant Jumbo is very creditable to our human nature; but now that the excitement has ceased, and the animal is far away from its old home, we may well ask whether this outcry was justified by facts. It has long been known that if a male elephant is kept in confinement, it becomes, after a certain number of years, extremely difficult of control, by reason of recurring fits of irritability, if not madness. Chumy, an elephant which was kept about fifty years ago at Exeter Change, London, in one of these fits of temper killed his keeper, and was afterwards despatched, after some scores of bullets had been fired into his huge frame. Another elephant at Liverpool had to be destroyed after killing two of his keepers. At Amsterdam, a third elephant met with a like fate after killing his attendant. At Cologne, the same story was repeated with another elephant; and at Versailles, a man had a very narrow escape from a similar death. These occurrences, and doubtless many others, were of course known to our Zoological authorities; and there had been for some time signs that Jumbo might not always remain the docile creature which the public imagined him to be. Huge oak beams eight inches square, and cased with sheet-iron, had been placed to strengthen his house. These he had in an irritable moment snapped as if they had been sticks of firewood. Anxiety as to what Jumbo might do in the future, led his masters to accept Mr Barnum's offer to buy him, and for this act the Council of the Society have been assailed in a way not pleasant to reflect upon.

The street tramway system, which has been so rapidly adopted in our large cities, is in London about to receive an extension of a very important character. Hitherto, in the Metropolis the tram lines have been laid in streets which are almost level, for the labour of drawing the huge cars up-hill is more than the most willing horses can bear. Highgate Hill and Pentonville Hill are now to be furnished with tramways worked on a plan which has been adopted for some years past with great success at San Francisco, known as the steep grade system. The cars are pulled up-hill by an endless wire-rope attached to a drum and stationary engine. This moving rope is sunk in an underground channel,

and can be gripped by the car at any point, so that the motion of the vehicle is under the absolute control of the driver. It would be well, however, in laying any further tram-rails, to make sure that they shall do no damage to the wheels of private conveyances. The system of horse-tramways on steep gradients in certain towns should never have been sanctioned. The cruelty that is daily practised upon horses is a disgrace to our boasted civilisation.

The Archaeological Society of Greece, to which the government have given the control of all matters relating to excavation and discovery of antiquities, seems to have issued a code of laws which will greatly hamper those who are endeavouring to trace the history of the past by the relics left by the former inhabitants of the country. No man is allowed to commence an excavation, even on his own ground, unless he agrees to give the proceeds to the Greek museums. In consequence of this prohibition, a great deal of secret digging goes on, and the treasures found are smuggled out of the country. In this way, their value as antiquities is much reduced; for the position where they were found, and the circumstances which led to their discovery, are lost sight of altogether.

A single and useful slip-link has been brought out and patented by Messrs Alexander & Co., of 190 Westminster Bridge Road, London, intended to be attached to the kidney-link of each horse's collar, so that when an animal falls it may be instantly released from the pole-chain. This is effected by simply touching the lever of the slip-link, enabling the horse, by being freed from the pole, at once to make endeavours to regain its feet by its own exertions. The invention has been found in practice to work well, and to be a great saving of time, as well as risk of danger to valuable horses.

A new and apparently useful invention has just been made by Mr Robert Pickwell, civil engineer, Hull, and consists of a Self-registering Ship's Compass, by means of which a diagram is produced showing: 1st, the exact steered course of the ship; 2d, the length of time the ship has been kept on any course; 3d, all the changes of the courses, and the exact time when such changes took place; 4th, in the event of a collision at sea, the bearing of the ship's head at the time is clearly shown. The diagram is applicable to long as well as to short voyages, and can be taken off and consulted daily, or be allowed to run the whole voyage not exceeding one hundred and fifty days. The compass itself is perfectly independent of the registering apparatus, which can be easily applied to any ordinary compass in general use.

The Fleuss diving apparatus has been already fully explained by us (Nos. 848 and 857). It may, however, be again mentioned that the object of the inventor was to enable the diver to carry on submarine operations without the necessity of having air pumped down through flexible tubes. A supply of pure air is secured by Mr Fleuss in a different way, namely, by an apparatus which the diver carries with him under water, for filtering the breath and admixing oxygen therewith, thus rendering it capable of being re-breathed. Part of this apparatus consisted of a heavy helmet and collar; but these Mr Fleuss

has now superseded by a lighter headgear for shallow-water diving, reserving the more cumbersome helmet for deep-sea diving.

OCCASIONAL NOTES.

LADIES' FASHIONS AND BIRD-LIFE.

THE fashion, which has perhaps always prevailed, of ladies adorning themselves more or less with the plumage of birds, has recently assumed a very objectionable phase. It is not now sufficient to make use of particular feathers of particular birds; it is necessary to have the bird-skin perfect and entire, and that not of common or merely beautiful birds, but of rare birds as well. A correspondent of a scientific contemporary the other day stated that he saw in a milliner's shop in Regent Street, London, four birds of paradise, two trogons—small birds of brilliant plumage—scarlet ibises by the dozen, a rare goat-sucker, kingfishers, orioles, and bee-eaters, not to mention other birds whose greater abundance might seem to excuse their wholesale sacrifice. 'The human race,' he adds, 'has already had to mourn the destruction of the dodo, the solitaire, the great auk, and the moa; let us not add to this list the *paradisoides*, the trogons, and the humming-birds.' In this desire we most cordially acquiesce. The lower animals in general are no doubt rightly enough made serviceable to man; and the sheep and the silkworm are equally laid under contribution as providers of materials for human comfort and adornment. Even the feathers of the larger birds, the ostrich, for instance, have long formed an important article of commerce; and the bird is cultivated for the sake of the plumy harvest which it yields. But when we come to appropriating, not alone the feathers of birds, but the skins of birds with all the plumage intact, an element of waste and destruction is introduced which cannot be too strongly deprecated. It is an unhappy and mischievous fashion, and we would earnestly appeal to our lady readers to do all in their power to lessen and discourage it.

THE COST OF A LONDON FOG.

In the number of this *Journal* for December 4, 1880, there was an article on London Fogs, in which attention was specifically drawn to the great increase of this nuisance within the last fifty years, this increase being largely traceable to the enormously greater consumption of coal consequent upon the enlarged population and trade of the Metropolis, along with the fact that no definite attempt had been made on the part of manufacturers and householders to consume their smoke. It was also shown that there was no serious difficulty other than the inexcusable inaction of authorities and manufacturers, in the way of having this improvement carried out, apparatus insuring the consumption of every particle of smoke having been known and used elsewhere for years. As an evidence of the evil of delay on the part of the Metropolitan authorities in formulating some general plan for securing that each chimney consumes its own smoke, a striking item of information comes to hand, namely, that a single day's fog in London brought into the pockets of one gas Company no less a sum than *twelve thousand pounds*. This represented the price of seventy-five million feet

of gas, which had to be consumed in lieu of that daylight which the unwholesome sanitary conditions of the great city had shut out by a curtain of its own raising. Take the London fogs as covering ten days in the year—and this is below the real mark—and we have a sum of one hundred and twenty thousand pounds actually thrown away. Such a sum of money capitalised would surely be sufficient to enable those responsible for the public health to set in operation some organisation by means of which complete smoke-consumption would be rendered imperative on the part of every manufacturer, and in course of time every householder as well, within the bounds of the Metropolis. The enormous cost entailed upon the city by the present system, while, in addition, propagating the existence of a very serious nuisance, ought to bring home to the various governing bodies in London a strong sense of the necessity for instant and thorough reform.

'HOUSE OF REST.'

In our notice last month of the Babbacombe House of Rest, we named Miss Skinner as the 'Lady Superintendent.' This we learn is a misapprehension, she being a member only of the Committee of Management.

MAY BLOSSOMS.

SWEET hawthorn blossoms, with the kiss of May
So coyly nestling 'mid your fragrant tips!
You slyly wooed her on her joyous way,
To steal the honey from her rosy lips.
Her lovely fleeting smile your faces wear;
Fading while we exclaim: 'How frail, how fair!'

While your dear beauties feast my gladdened eyes,
Far from this busy mart my fancy treads;
Twine I your fairy buds 'neath laughing skies,
In crowns of pearly bloom for weary heads!
And with what tender joy I lay you now
On bosom racked with pain, and throbbing brow!

Down many a pleasant country lane I see
Fair childhood laden with your dainty bloom;
Dreams, idle dreams—a child-voice calls to me,
While timid hands reach shyly through the gloom—
Such eager trembling hands, that yearn to touch
The darling flowers the child-heart loves so much.

A childish voice, a little wistful face,
Pleads through the gloom—ah! surely not in vain;
While your faint perfume fills the mournful place,
Waking a world of mingled joy and pain;
Bearing through narrow court, and alley gray,
God's blessed sunshine, and the breath of May.

Oh, nestle fondly to that wan young cheek,
Where tears of rapture lie like April dew!
In loving whispers to that child-heart speak
Of warbling birds, green lanes, and skies so blue,
Of nodding violets that in dreams of love
Breathe odorous incense through the shady grove.

Before that little fluttering pulse shall cease
Its feeble throbbing—e'er you fall away
From the fast chilling hand—oh, whisper 'Peace,'
Then breathe the soft perfume round that form of clay,
While the blest spirit answers: 'All is well!
May is eternal May where angels dwell!'

FANNY FORRESTER.

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